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AMPHIBIAN INVENTORY OF THE JARBIDGE RESOURCE AREA BOISE DISTRICT

by Mike McDonald
and
Robert F. Marsh

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**AMPHIBIAN INVENTORY OF THE JARBIDGE
RESOURCE AREA, BOISE DISTRICT**

FINAL REPORT

February 15, 1995

Cooperative Challenge Cost Share Project

**Bureau of Land Management
Boise District
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Boise, ID 83705**

and

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INTRODUCTION

Amphibians are important members of natural ecosystems. They are prey for birds, mammals, and fish and constitute a significant amount of biomass in many ecosystems (Burton and Likens 1975, Pough 1980). In long-term environmental monitoring programs, amphibians are useful bioindicators to evaluate environmental health (Wake and Morowitz 1990). Recently, the scientific community has expressed concern over the apparent world-wide decline of many amphibian populations (Wake and Morowitz 1990, Wyman 1990). A variety of factors including acid rain, heavy metal and pesticide contamination, habitat degradation, changes in land-use practices, and the introduction of exotic species are factors that may contribute to declines (Phillips 1990, Livermore 1992).

Despite their ecological importance, little is known about the status of amphibian populations in Idaho. Although the spotted frog (*Rana pretiosa*) is presently listed as a Category 1 Candidate Species (Conservation Data Center 1994) in the southern portion of its range, little is known about its distribution and abundance in Idaho south of the Snake River. To date, spotted frog populations have been documented in only 6-10 sites in Idaho south of the Snake River (Jim Munger, pers. comm.).

More detailed information on amphibians is needed to develop management guidelines to protect and maintain populations. Data provided by this project will help preserve an important group of wildlife and help land management professionals in make better informed land-use decisions.

The objectives of this project were: (1) to survey potential spotted frog and other amphibian habitats within the Jarbidge Resource Area (JRA), and (2) if amphibian populations

exist, determine their status and distribution.

METHODS

Survey sites were initially selected to confirm recent amphibian observations within the JRA. We also used National Wetland Inventory Maps to identify potential amphibian breeding sites. Breeding call surveys were used to locate adults while visual searches were used to locate egg masses, larvae, and adults (Campbell and Christman 1982, Karns 1986). Species presence, approximate numbers, and location were recorded for each observation. Habitat information including plant species present, configuration of the water source (size, depth, bottom composition), and water chemistry (temperature and pH) were also collected at each observation. Ground and air temperature and weather information were recorded per survey site visit.

Each survey site was classified according to the U. S. Fish and Wildlife Service's Wetlands and Deepwater Habitat Classification System (Cowardin et al. 1979). Fish presence/absence was determined by visual observation, rod and reel sampling, or records from the Idaho Department of Fish and Game (IDFG) records (Jerome, Idaho). Historical data on the presence of amphibians in Twin Falls and Owyhee counties were obtained from the Northern Intermountain Herpetological Data Base (Idaho Museum of Natural History, Pocatello, Idaho).

STUDY SITES

Seven sites were surveyed in the JRA (six in Twin Falls County and one in Owyhee County) from 4 May to 8 July, 1994 (Table 1, Figure 1). All sites were visited at least three times with the exception of Murphy Hot Springs and Salmon Falls Creek above Salmon Falls Creek Reservoir - both were visited twice. Each survey site is described. Distances to nearest population centers or landmarks are estimates. Additional physical and chemical data are

provided in Table 1.

1. **Tuanna Gulch** - The site is located 6.2 km southwest of Bliss, Idaho. The survey site encompassed a 2 km stretch of perennial stream dissected by numerous beaver dams and small ponds (Figure 2). A road, running parallel to the site, allowed access. The site is located on Bureau of Land Management (BLM) Surface Management Status Map Twin Falls Quadrangle: Township 6 South; Range 12 East; Sections 14 and 23.

2. **Yahoo Creek** - The site is located 9.8 km southwest of Hagerman, Idaho. The survey site included a 1.5 km stretch of stream and a ~ 1 ha marsh (Figure 3). The marsh was fenced to exclude livestock. Access was limited to a road intersecting the creek at the northern end of the survey site. The site is located on BLM Surface Management Status Map Twin Falls Quadrangle: Township 8 South; Range 13 East; Sections 9 and 16.

3. **Salmon Falls Creek at Balanced Rock** - The site is located 8.6 km northwest of Castleford, Idaho. The survey area was a 1.5 km stretch of Salmon Falls Creek south of Balanced Rock Crossing (Figure 4). The entrance to Balanced Rock Park allowed access. The creek maintains trout (*Oncorhynchus spp*) and smallmouth bass (*Micropterus dolomieu*) and is annually stocked by the IDFG (Fred Partridge, pers. comm.). The site is located on BLM Surface Management Status Map Twin Falls Quadrangle: Township 10 South; Range 13 East; Section 20.

4. **Salmon Falls Creek at Lily Grade** - The site is located 9.4 km south of Castleford, Idaho. The survey area consisted of two 0.75 km segments of creek running northwest and southeast of the Lily Grade bridge (Figure 5). Access was limited to one road (17 Mile Road) which crosses the creek at Lily Grade. The creek maintains a trout and smallmouth bass fishery. The site is located on BLM Surface Management Status Map Rogerson Quadrangle: Township 11

South; Range 14 East; Section 19 and Township 11 South; Range 13 East; Section 24.

5. **Antelope Springs** - The site is located 4.6 km northwest of Salmon Falls Creek Reservoir dam. The survey area was a 1.5 km stretch of creek starting at its origin (Figure 6). The area showed signs of heavy livestock use (lack of wetland vegetation, trampled stream banks, cow feces). Access was limited to one road intersecting the creek near its origin. The site is located on BLM Surface Management Status Map Rogerson Quadrangle: Township 14 South; Range 14 East; Sections 2 and 11.

6. **Salmon Falls Creek south of Salmon Falls Creek Reservoir** - The survey site consisted of a 18 km stretch of creek starting south of Jackpot, Nevada where U.S. Highway 93 intersects the creek, to 1 km from the southern end of Salmon Falls Creek Reservoir (Figure 7). The creek is inhabited by trout and grazed by livestock. Because of limited access, this stretch was surveyed via canoe. Five temporary wetlands adjacent to the creek, 0.5 to 1.5 km south of the reservoir, were surveyed on foot. The wetland surveys were not included in the analysis because we did not survey the sites until the first week of July after they had dried or stagnated. The survey area is located on BLM Surface Management Status Maps Rogerson and Jackpot Quadrangles.

7. **East Fork of Jarbidge River at Murphy Hot Springs** - This site was the only one located in Owyhee County. Starting at Murphy Hot Springs, the survey site included two-1 km stretches of river and adjacent wetlands above and below the town (Figure 8). A road running along the river provided access. The river supports a trout population. The site is located on BLM Surface Management Status Map Sheep Creek Quadrangle: Township 16 South; Range 9 East; Sections 14 and 26.

RESULTS AND DISCUSSION

Species Summaries

Three amphibian species were identified during the survey (Table 1). Below is a brief species description including historical observations, locations, and survey techniques used. In addition, we provide information on species potentially found in the JRA based on historical observations, known ranges, and suitable habitat (Table 2).

Pacific Chorus Frog (*Pseudacris regilla*)

Pacific chorus frogs (formerly pacific tree frogs) were found at three of seven survey sites (Table 1). Calling adults were located in the Yahoo Creek marsh and at the head waters of Antelope Springs (Table 1, Figures 3 and 6). Tadpoles were found in wetlands adjacent to the Jarbidge River at Murphy Hot Springs (Table 1, Figure 8). Frog presence was confirmed using breeding call surveys and visual searches (Table 1). Tables 3 and 4 show historical observations of pacific chorus frogs in Twin Falls and Owyhee Counties.

Western Toad (*Bufo boreas*)

Western toads were found in two of seven survey sites (Table 1). Visual searches revealed adults in Tuanna Gulch and the Yahoo Creek marsh (Table 1, Figures 2 and 3). Tables 3 and 4 show historical observations of western toads in Twin Falls County.

Great Basin Spadefoot Toad (*Spea intermontanus*)

The spadefoot toads were found in Tuanna Gulch using breeding call surveys and visual searches at dusk (Table 1, Figure 2). Tables 3 and 4 show historical observations of spadefoot toads in Twin Falls and Owyhee Counties.

Leopard Frog (*Rana pipiens*)

Leopard frogs were not located during our survey (Table 2) despite historical observations at one of the survey sites - Balanced Rock Park (Table 3). A review of historical observations indicate leopard frogs were the most commonly observed species in the Twin Falls County database (Table 3). Table 4 shows historical observations of leopard frogs in Owyhee County.

Spotted Frog (*Rana pretiosa*)

Spotted frogs were not found during our survey (Table 2). However, recent surveys in northeast Nevada located two adult spotted frogs in Salmon Falls Creek approximately 19 km southwest of Jackpot, Nevada (Mark Ports, pers. comm.). A review of historical observations from Twin Falls County shows no record of spotted frogs (Table 3). Table 4 indicates all spotted frog observations in Idaho south of the Snake River were from southwestern Owyhee County.

Woodhouse's Toad (*Bufo woodhousei*), Striped Chorus Frog (*Pseudacris triseriata*), and Bull Frog (*Rana catesbeiana*)

All three species are possible inhabitants in the Jarbidge Resource Area but none were located during our surveys (Table 2). Table 3 shows none of the species have been historically observed in Twin Falls County. Table 4 shows the bull frog and Woodhouse's toad have been observed in Owyhee County.

Wetland Associations

Five of the seven survey sites were classified as intermittent or perennial riverine systems and one classified as palustrine (Table 1). Murphy Hot Springs contained both perennial riverine

and palustrine systems (Table 1). Amphibians were found at both palustrine sites and in two of six riverine sites (Table 1). When amphibians were found in riverine sites (two sites), both were intermittent riverine systems and a portion of the site had been impounded and became palustrine. A road culvert on Antelope Springs pooled water near the head of the spring while beaver activity in Tuanna Gulch created a series of ponds.

Physical and Chemical Site Characteristics

Water temperature and pH did not vary widely between sites (temperature 16.0-20.5°C and pH 6.5-8.5) (Table 1). Amphibians were found across the range of water temperature and pH values (Table 1).

Elevations ranged from 900 m at Tuanna Gulch to 1,500 m at Murphy Hot Springs, Antelope Springs, and Salmon Falls Creek above the reservoir. Elevations where amphibians were found ranged from 900 m for spadefoot and western toads to 1500 m for pacific chorus frogs.

Fish

Although it was beyond the scope of this survey to assess fish/amphibian interactions, our findings warrant some discussion. Hayes and Jennings (1986) suggested that fish, especially introduced species, may limit amphibian distribution. In our survey, fish were absent from amphibian sites (Table 1). Conversely, fish were present in all sites where amphibians were absent (Table 1). In addition, our inability to find leopard frogs at Balanced Rock Park, a historical observation site, may be related to introduced fishes (trout and smallmouth bass) and needs further study. Salmon Falls Creek at Balanced Rock Crossing is annually stocked with hatchery rainbow trout (Fred Partridge, pers. comm.).

Our inability to detect amphibians in sites containing fish may however, reflect a lack of amphibian habitat in the perennial riverine systems or the effects of drought. For example, fast moving, cobble/gravel streams provide poor breeding habitat for amphibians found in the JRA (Nussbaum et al. 1983). Also, Clark et al. (1994) found striped chorus frogs (*Pseudacris triseriata*) in more than twice as many sites during a wet year than dry year (wet year = 25 sites, dry year = 9 sites). The authors strongly suggest repeating surveys over multiple years to reduce the influence of environmental conditions like drought (Clark et al. 1994).

Reptile Observations

Appendix A is a list of reptile observations by species, date observed, and location.

SUMMARY

1. No leopard frogs were encountered in our survey despite historical observations in Twin Falls County.
2. Amphibians were found in palustrine systems or palustrine sites within modified riverine systems.
3. Amphibians were not observed in perennial riverine systems.
4. Amphibians were not found in sites that contained fish, and fish were absent in sites where amphibians were observed.

RECOMMENDATIONS

1. Because 1994 was a below normal precipitation year, additional surveys should be conducted to negate any influence drought may have had on our findings.
2. Because of recent concern over leopard frog and western toad populations in southern Idaho, additional surveys should be conducted in potential habitat and historical observation sites should be revisited.
3. A recent discovery of spotted frogs in Salmon Falls Creek in northeast Nevada warrants further survey work in that drainage in Idaho.

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Table 1. Survey sites, wetland classification, presence of amphibians or fish, physical and chemical characteristics, and survey techniques, Jarbidge Resource Area, 4 May to 8 July, 1994.

SITE NAME	WETLAND CLASS	FISH PRESENT	pH AVG	WATER TEMP (°C) AVG	ELEVATION (m)	AMPHIBIANS PRESENT	SURVEY TECHNIQUE ¹
Tuanna Gulch	Riverine, Intermittent	No	6.5	20.5	900	Western Toad, Great Basin Spadefoot	visual search; breeding call surveys
Yahoo Creek	Palustrine, Emergent	No	8.0	17.4	1,000	Pacific Tree Frog, Western Toad	visual search; breeding call surveys
Balanced Rock - Salmon Falls Creek	Riverine, Upper Perennial	Yes	8.4	17.2	1,100	none found ²	visual search; breeding call surveys
Lily Grade - Salmon Falls Creek	Riverine, Upper Perennial	Yes	8.4	17.3	1,000	none found	visual search; breeding call surveys
Antelope Springs	Riverine, Intermittent	No	7.6	18.0	1,500	Pacific Tree Frog	visual search; breeding call surveys
Salmon Falls Creek (above reservoir)	Riverine, Upper Perennial	Yes	8.5	16.0	1,500	none found	visual search
Murphy Hot Springs (Ponds)	Palustrine, Emergent	No	6.8	20.5	1,500	Pacific Tree Frog	visual search
Murphy Hot Springs (River)	Riverine, Upper Perennial	Yes	7.2	17.0	1,500	none found	visual search

¹ Survey techniques in order of effectiveness.

² Historical observation of leopard frogs at Balanced Rock Park

Figure 1. Site locations for amphibian survey in Jarbidge Resource Area, 4 May to 8 July, 1994.
1 = Tuanna Gulch, 2 = Yahoo Creek, 3 = Balanced Rock, 4 = Lily Grade, 5 = Antelope Springs, 6 = Salmon Falls Creek below reservoir, 7 = Murphy Hot Springs



Figure 2. Survey Site #1 - Tuanna Gulch with observed amphibian locations, Jarbidge Resource Area, 4 May to 8 July, 1994. Bliss Quadrangle, 7.5 Minute Series, Scale 1:24 000. GBSF = Great Basin spadefoot toad, WT = western toad

Figure 3. Survey Site #2 - Yahoo Creek with observed amphibian locations, Jarbidge Resource Area, 4 May to 8 July, 1994. Yahoo Creek Quadrangle, 7.5 Minute Series, Scale 1:24 000. WT = western toad, PCF = pacific chorus frog

Figure 4. Survey Site #3 - Salmon Falls Creek at Balanced Rock, Jarbidge Resource Area, 4
May to 8 July, 1994. Balanced Rock Quadrangle, 7.5 Minute Series, Scale 1:24 000.

Figure 5. Survey Site #4 - Salmon Falls Creek at Lily Grade, Jarbidge Resource Area, 4 May to 8 July, 1994. Roseworth NE Quadrangle, 7.5 Minute Series, Scale 1:24 000.

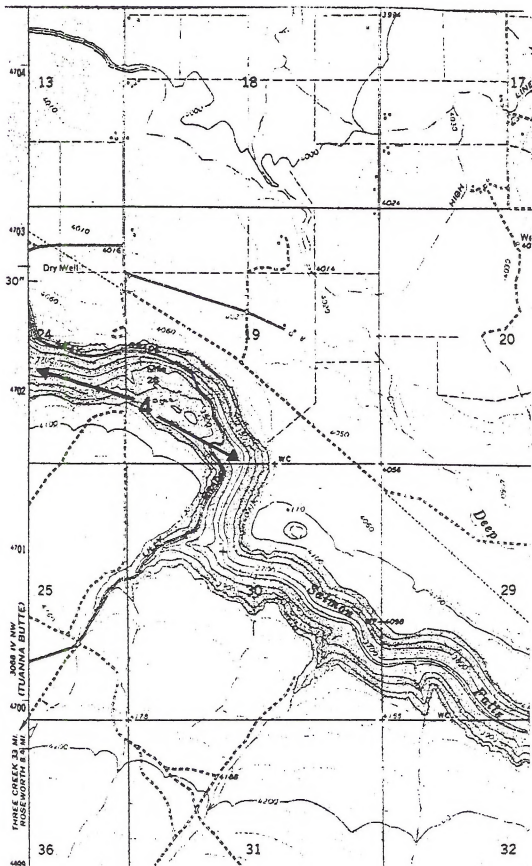


Figure 6. Survey Site #5 - Antelope Springs with observed amphibian locations, Jarbidge Resource Area, 4 May to 8 July, 1994. Brown's Bench North Quadrangle, 7.5 Minute Series, Scale 1:24 000. PCF = pacific chorus frog

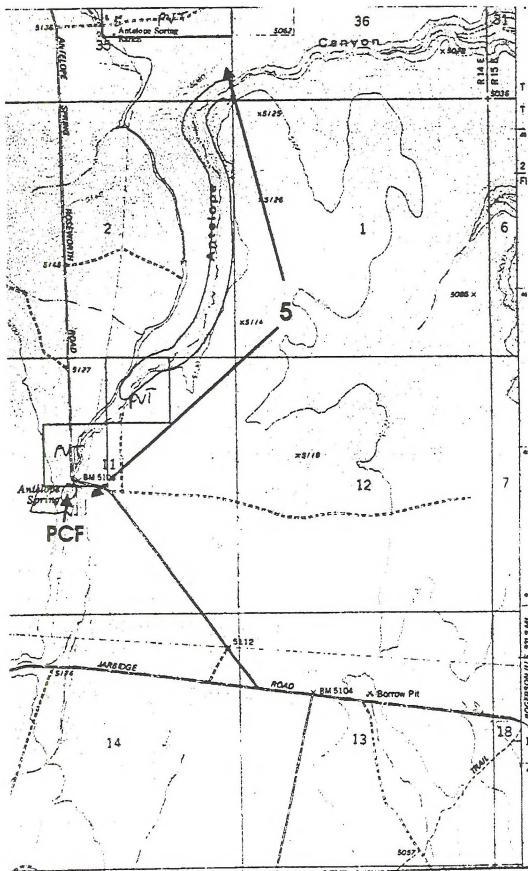


Figure 7. Survey Site #6 - Salmon Falls Creek south of Salmon Falls Creek Reservoir, Jarbidge Resource Area, 4 May to 8 July, 1994. Meteor Quadrangle, 7.5 Minute Series, Scale 1:24 000.

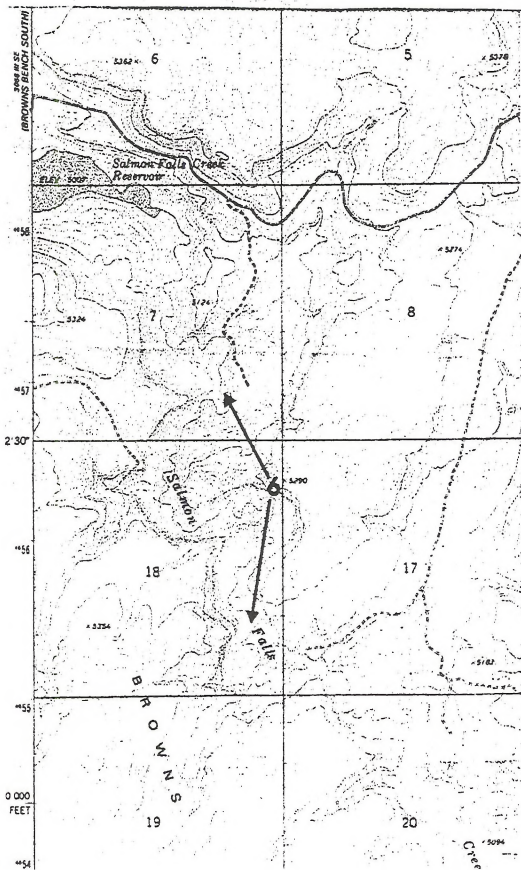


Figure 8. Survey Site #7 - Jarbidge River at Murphy Hot Springs with observed amphibian locations, Jarbidge Resource Area, 4 May to 8 July, 1994. Murphy Hot Springs Quadrangle, 7.5 Minute Series, Scale 1:24 000. PCF = pacific chorus frog

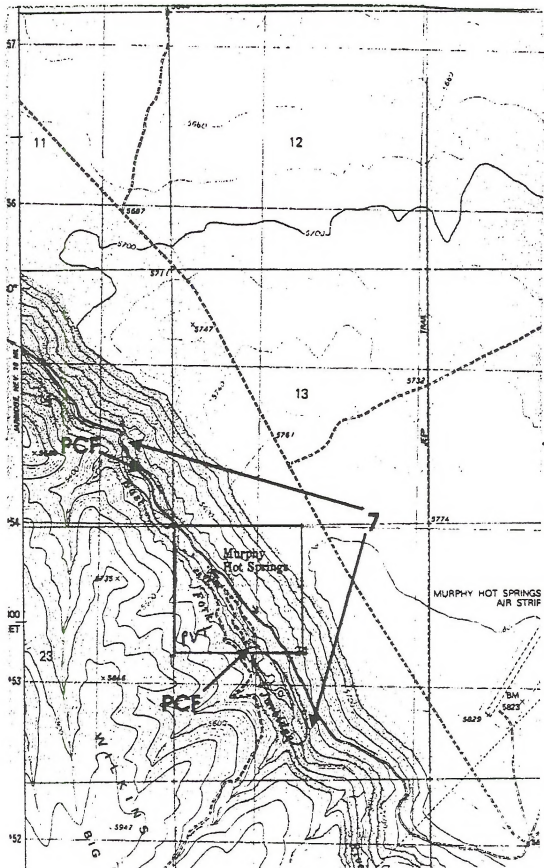


Table 2. Amphibian survey results in the Jarbidge Resource Area, 4 May to 8 July, 1994.

COMMON ¹ NAME	SCIENTIFIC NAME	STATUS ³	DISTRIBUTION ⁴	ESTIMATED ABUNDANCE ⁴	VOUCHER ⁵	SAMPLING TECHNIQUE	COMMENTS
CONFIRMED²							
Western Toad	<i>Bufo boreas</i>	SSC, BLM-S	intermediate	uncommon	photograph	visual search	1 adult found in Tuanna Gulch and one in Yahoo Creek
Great Basin Spadefoot Toad	<i>Spea intermontanus</i>	PNG	intermediate	common	photograph	breeding call surveys; visual search	adults observed and heard in Tuanna Gulch
Pacific Chorus Frog	<i>Pseudacris regilla</i>	PNG	widespread	common	recorded call	breeding call surveys; visual search	adults in Antelope Springs and Yahoo Creek; tadpoles at Murphy Hot Springs
PROBABLE²							
Leopard Frog	<i>Rana pipiens</i>	SSC, BLM-S					historical observations in the resource area (Balanced Rock Park)
POSSIBLE²							
Spotted Frog	<i>Rana pretiosa</i>	SSC, C1, BLM-S, FSR4-S					historical observations in Owyhee County
Western Chorus Frog	<i>Pseudacris triseriata</i>	PNG					historical observations in Cassia County
Woodhouse's Toad	<i>Bufo woodhousei</i>	PNG					historical observations in Owyhee County
Bullfrog	<i>Rana catesbeiana</i>	Game Species					historical observations in Owyhee and Gooding Counties

¹ Common names based on Collins (1990).² Confirmed - voucher or reliable observation
Probable - within range, suitable habitat
Possible - range nearby, suitable habitat³ Based on Idaho Conservation Data Center (1994)

SSC = Species of Special Concern (IDFG); PNG = Protected Nongame (IDFG)

C1 = Category 1 Candidate Species (USFWS)

BLM-S = Sensitive Species

FSR4-S = Sensitive Species Region 4 (USFS)

⁴ Based on our survey.⁵ Museum specimen, photograph, tape recording

Table 3. Historic observations of amphibians in Twin Falls County, Idaho. Data are from the Northern Intermountain Herpetological Data Base, Idaho Museum of Natural History, Pocatello, Idaho.

MUSEUM	COMMON NAME	SCIENTIFIC NAME	LOCALITY	DATE	COLLECTOR	REMARKS
BSU 21	Pacific Chorus Frog	<i>Pseudacris regilla</i>	8 1/2 miles S.S.E. Twin Falls	3 October, 1969	Hoesinsky	
BSU 25	Leopard Frog	<i>Rana pipiens</i>	8 1/2 miles S.S.E. Twin Falls	5 October, 1969	Hoesinsky	
IMNH 128	Pacific Chorus Frog	<i>Pseudacris regilla</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 129	Pacific Chorus Frog	<i>Pseudacris regilla</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 132	Western Toad	<i>Bufo boreas</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 133	Western Toad	<i>Bufo boreas</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 134	Western Toad	<i>Bufo boreas</i>	E of Rogerson, Sawtooth National Forest	9 June, 1956		
IMNH 394	Leopard Frog	<i>Rana pipiens</i>	Salmon Falls Cr above Balanced Rock St. Park	14 June, 1975		
UIM 153	Leopard Frog	<i>Rana pipiens</i>	12 miles WNW of Buhl, US 30, Salmon Falls	6 May, 1964	P. Dumas	subadult
UIM 221	Leopard Frog	<i>Rana pipiens</i>	0.5 mi. E of Twin Falls	13 June, 1958	Wilcox	adult
UIM 222	Leopard Frog	<i>Rana pipiens</i>	Twin Falls city limits	20 June, 1958	Gillenwater	adult
UIM 268	Leopard Frog	<i>Rana pipiens</i>	12 miles WNW of Buhl, Salmon Falls	13 April, 1957	P. Dumas	adult 3 subadults
UIM 385	Leopard Frog	<i>Rana pipiens</i>	Twin Falls	10 August, 1976	S. File	adult

Table 4. Historic observations of amphibians in Owyhee County, Idaho. Data are from the Northern Intermountain Herpetological Data Base, Idaho Museum of Natural History, Pocatello, Idaho.

MUSEUM	COMMON NAME	SCIENTIFIC NAME	LOCALITY	DATE	COLLECTOR	REMARKS
BSU 21	Pacific Chorus Frog	<i>Pseudacris regilla</i>	12 miles SW Marsing	18 September, 1971	Belknap	
BSU 31	Leopard Frog	<i>Rana pipiens</i>	W tip of Res. at Bruneau Sand Dunes State Park	9 September, 1978	Brad Hammond	
BSU 33	Spotted Frog	<i>Rana pretiosa</i>	Indian Bath Hot Springs	7 October, 1978	Moore	
BSU 33	Spotted Frog	<i>Rana pretiosa</i>	Indian Bath Hot Springs	7 October, 1978	Reichert	
BSU 48	Leopard Frog	<i>Rana pipiens</i>	12 miles south of Bruneau spring of Indian bathtubs	7 October, 1978	Cheryl Cambell	
BSU 48	Leopard Frog	<i>Rana pipiens</i>	9 miles ESE Grandview	13 October, 1973	MH Fuehrer	
BSU 48	Leopard Frog	<i>Rana pipiens</i>	Bruneau sand dunes 7 miles ENW Bruneau	27 September, 1969	Bill Nolan	
BSU 48	Leopard Frog	<i>Rana pipiens</i>	Indian Bathtubs near Bruneau river	6 October, 1978	N. Stover	
BSU 48	Leopard Frog	<i>Rana pipiens</i>	Indian Bathtubs	7 October, 1978	M. Moore	
FMNH 46183	Pacific Chorus Frog	<i>Pseudacris regilla</i>	10 Miles South Of Givens Springs			
FMNH 46184	Pacific Chorus Frog	<i>Pseudacris regilla</i>	10 Miles South Of Givens Springs			
FMNH 46185	Pacific Chorus Frog	<i>Pseudacris regilla</i>	10 Miles South Of Givens Springs			
FMNH 46186	Pacific Chorus Frog	<i>Pseudacris regilla</i>	10 Miles South Of Givens Springs			
FMNH 46188	Western Toad	<i>Bufo boreas</i>	10 Miles North Of Givens Springs			
FMNH 46189	Western Toad	<i>Bufo boreas</i>	10 Miles North Of Givens Springs			
FMNH 46190	Western Toad	<i>Bufo boreas</i>	10 Miles North Of Givens Springs			
IMNH 1247	Spadefoot Toad	<i>Spea intermontanus</i>	2.1 WNW to St. hwy 67 on St. hwy 78	26 June, 1990	M.E.Dorcas	calling from ditch 1325 hrs
IMNH 1248	Spadefoot Toad	<i>Spea intermontanus</i>	0.9 mi. WNW of St. hwy. 67 on St. hwy 78	25 June, 1990	M.E.Dorcas	calling from irrigation ditches 2340 hrs
IMNH 1249	Spadefoot Toad	<i>Spea intermontanus</i>	6.2 mi. WNW of St. hwy 67 on St. hwy 78	25 June, 1990	M.E.Dorcas	agriculture area 2350 hrs
IMNH 1250	Spadefoot Toad	<i>Spea intermontanus</i>	0.6 mi. WNW of Silver City turnoff on St. Hwy 78	26 June, 1990	M.E.Dorcas	sage desert, 0045 hrs
IMNH 1265	Woodhouse's Toad	<i>Bufo woodhousei</i>	St.hwy 78, 5.6 mi. ESE of Oreana turnoff, 100 m W. of Castle Creek	26 June, 1990	M.E.Dorcas	0110 hrs, calling from ditches
IMNH 220	Leopard Frog	<i>Rana pipiens</i>	Sand Dune Lakes, NE of Bruneau	19 June, 1958		
IMNH 331	Bull Frog	<i>Rana catesbeiana</i>	T6S R5E, where Hwy. 51 crosses Bruneau River, SW of Bruneau	30 September, 1967		one larvae
IMNH 334	Woodhouse's Toad	<i>Bufo woodhousei</i>	Cove Campground	15 July, 1974		
IMNH 404	Woodhouse's Toad	<i>Bufo woodhousei</i>	near Oreana	22 July, 1975		
UCM 9326	Spotted Frog	<i>Rana pretiosa</i>	16 mi W Triangle	19 August, 1955		
UIM 148	Pacific Chorus Frog	<i>Pseudacris regilla</i>	Boulder Creek, 3 miles E of Jordan Valley	13 March, 1954	P. Dumas	adult
UIM 149	Pacific Chorus Frog	<i>Pseudacris regilla</i>	Boulder Creek, 7 miles SE of Jordan Valley	15 May, 1954	P. Dumas	adult
UIM 195	Spadefoot Toad	<i>Spea intermontanus</i>	1 mi. S of Grandview	6 June, 1958	P. Dumas	

Table 4 - continued

UIM 198	Woodhouse's Toad	<i>Bufo woodhousei</i>	1 mile S of Grandview	21 August, 1958	P. Dumas	adult
UIM 269	Spotted Frog	<i>Rana pretiosa</i>	16 miles W of Triangle, T 6S, R 4W, sec 19	19 June, 1955	P. Dumas	subadult
UIM 271	Leopard Frog	<i>Rana pipiens</i>	5 miles SW of Homedale, Sucker Creek	1 May, 1958	P. Dumas	adult
UIM 293	Western Toad	<i>Bufo boreas</i>	5 miles SW of Homedale, Sucker Creek	28 August, 1958	W. Griffin	subadult
UIM 310	Woodhouse's Toad	<i>Bufo woodhousei</i>	1 mile S of Grandview	1 September, 1955	P. Dumas	adult
UIM 337	Leopard Frog	<i>Rana pipiens</i>	0.5 mi. N of Grandview	13 June, 1958	P. Dumas	subadult
UIM 345	Pacific Chorus Frog	<i>Pseudacris regilla</i>	Boulder Creek, 7 mi. SE of Jordan Valley	19 May, 1955	P. Dumas	
UIM 366	Woodhouse's Toad	<i>Bufo woodhousei</i>	Owyhee Avenue, Homedale	13 August, 1955	W. Griffin	adult
UIM 367	Woodhouse's Toad	<i>Bufo woodhousei</i>	Owyhee Avenue, Homedale	7 May, 1971	W. Griffin	adult
UIM 376	Spotted Frog	<i>Rana pretiosa</i>	16 miles W of Triangle	4 April, 1964	P. Dumas	adult
UIM 392	Spadefoot Toad	<i>Spea intermontanus</i>	.25 miles W of Bruneau	7 May, 1971	P. Dumas	adult 1 subadult
UIM 418	Pacific Chorus Frog	<i>Pseudacris regilla</i>	7 mi. SE of Jordan Valley, Boulder Creek	14 June, 1958	P. Dumas	adult
UIM 428	Spadefoot Toad	<i>Spea intermontanus</i>	.25 miles W of Bruneau	11 May, 1967	P. Dumas	adult
UIM 429	Spadefoot Toad	<i>Spea intermontanus</i>	1 mile S of Grandview	18 June, 1975	P. Dumas	adult
UIM 576	Spotted Frog	<i>Rana pretiosa</i>	Owyhee Mountains--Johnson Lakes	25 May, 1987	L. Diller	adult
UIM 577	Leopard Frog	<i>Rana pipiens</i>	Johnson Lakes, Owyhee Mountains	28 July, 1958	L. Diller	adult
UIM 578	Pacific Chorus Frog	<i>Pseudacris regilla</i>	Johnson Lakes, Owyhee Mountains	3 September, 1984	L. Diller	subadult
UIM 73	Pacific Chorus Frog	<i>Pseudacris regilla</i>	2 miles NE of Silver City	17 October, 1958	P. Dumas	larvae
UIM 75	Pacific Chorus Frog	<i>Pseudacris regilla</i>	16 miles W of Triangle	28 April, 1968	P. Dumas	subadult
UIM 76	Spotted Frog	<i>Rana pretiosa</i>	6 miles NW of Triangle	30 July, 1958	P. Dumas	subadult
UIM 92	Spotted Frog	<i>Rana pretiosa</i>	16 miles W of Triangle	14 April, 1956	P. Dumas	adult
UIM 93	Spotted Frog	<i>Rana pretiosa</i>	16 miles W of Triangle	7 May, 1968	P. Dumas	adult
UTACV 16457	Spadefoot Toad	<i>Spea intermontanus</i>	11.9 km S Bruneau on St Hwy 51.	28 June, 1985		
UTACV 16458	Western Toad	<i>Bufo boreas</i>	Owyhee River, 52.3 km SSE Jordan Valley, OR	30 June, 1985		lot of 30 larvae
UTACV 16953	Woodhouse's Toad	<i>Bufo woodhousei</i>	0.6 km E St Hwy 51 on St Hwy 78	27 June, 1985		
UTACV 16954	Woodhouse's Toad	<i>Bufo woodhousei</i>	13.2 km S Bruneau on St Hwy 51	28 June, 1985		
UTACV 16955	Pacific Chorus Frog	<i>Pseudacris regilla</i>	62.1 km SSE Jordan Valley, Oregon	30 June, 1985		
UTACV 17051	Spotted Frog	<i>Rana pretiosa</i>	47.6 km WSW Hwy 51 on Jordon Valley Road	29 June, 1985		larvae
UTACV 17057	Spotted Frog	<i>Rana pretiosa</i>	47.6 km WSW Hwy 51 on Jordon Valley Road.	29 June, 1985		adults

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Appendix A. Date and location of reptile observations during the Jarbidge Resource Area Amphibian Survey, 4 May to 8 July, 1994.

COMMON NAME	SCIENTIFIC NAME	DATE	LOCATION
Western Rattlesnake	<i>Crotalus viridis</i>	May 10, 1994	Tuanna Gulch
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Gopher Snake	<i>Pituophis catenifer</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Gopher Snake	<i>Pituophis catenifer</i>	May 28, 1994	Balanced Rock State Park, Salmon Falls Creek
Side-blotched Lizard	<i>Uta stansburiana</i>	June 15, 1994	W. slope of Tuanna Gulch .5 miles S. of Shoestring Road
Whip-tailed Lizard	<i>Cnemidophorus tigris</i>	June 15, 1994	W. slope of Tuanna Gulch .5 miles S. of Shoestring Road
Whip-tailed Lizard	<i>Cnemidophorus tigris</i>	June 15, 1994	W. slope of Tuanna Gulch .25 miles S. of Shoestring Rd
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	June 15, 1994	Balanced Rock Park S. of crossing
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	June 15, 1994	Balanced Rock Park S. of crossing
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	oxbow of Salmon Falls Cr above reservoir (T16S, R14E, S18)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	on shore adjacent to Salmon Falls Creek above reservoir (T16S, R14E, S18)
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	May 28, 1994	in Salmon Falls Creek above reservoir (T16S, R14E, S18)

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